

CLAIMS

We claim as our invention:

1. Apparatus, comprising:

an external storage device having a normal partition which can be referred to by a user and a hidden partition storing an executable program for an operating system and hidden from the user;

5 a reader which reads the executable program for the operating system from the hidden partition to a main storage unit in response to a direction for reading the program from the user; and

an execution unit which executes the operating system read into said main storage unit.

10 2 Apparatus of Claim 1, wherein said reader transmits a predetermined password to said external storage device to permit said external storage device to read the hidden partition.

15 3. Apparatus of Claim 1, wherein the operating system is a sub-operating system which is activated in a time period shorter than that required to activate a main operating system which runs in the apparatus when the user has not made the direction, and said reader reads the executable program for the sub-operating system from the hidden partition hidden from the main operating system.

4. Apparatus of Claim 1, wherein the operating system is a sub-operating system having a power consumption per unit time lower than that of a main operating system which runs in the apparatus when the user has not made the direction, and said reader reads the executable program for the sub-operating system from the hidden partition hidden from the main operating system to said main storage device.

5. Apparatus of Claim 1, wherein the operating system is a sub-operating system which is activated in a time period shorter than that required to activate a main operating system which runs in the apparatus when the user has not made the direction, said apparatus further comprising:

a suspend unit which stops the operation of the main operating system and saves the state of execution of the main operating system to a save area when receiving a direction for suspension from the user during execution of the main operating system;

wherein said reader reads the executable program for the sub-operating system from the hidden partition to said main storage device when the direction for reading is received from the user in the suspended state after the direction for suspension has been received.

6. Apparatus of Claim 5, wherein said suspend unit shifts the main operating system to the suspended state when receiving a switching direction for switching from the main operating system to the sub-operating system, and said reader reads the executable program for the sub-operating system to said main storage device by recognizing the reception of the direction for reading when the main operating system enters the suspended state.

7. Apparatus of Claim 6, further comprising a resume unit which restores the state of execution of the main operating system from the save area and resumes the execution of the main operating system when the execution of the sub-operating system is completed.

5 8. Apparatus of Claim 5, wherein said suspend unit saves the state of execution of the main operating system to the save area provided in the hidden partition.

10 9. Apparatus of Claim 5, further comprising a device driver executed on the main operating system, said device driver requesting the main operating system to assign part of the main storage device as the save area; wherein said suspend unit saves the state of execution to the save area assigned by said device driver.

15 10. Apparatus of Claim 5, wherein said suspend unit secures the save area in an NVS (Non-Volatile-Sleeping) area by using an ACPI function provided in the apparatus.

11. Apparatus of Claim 5, wherein said suspend unit uses as the save area a video memory used for on-screen display by the apparatus.

12. Apparatus of Claim 11, wherein said suspend unit uses as the save area an unused area not used by the sub-operating system in said video memory.

20 13. Apparatus of Claim 5, wherein said suspend unit uses as the save area a storage area powered off to lose stored contents when the main operating system is in the suspended state and when the sub-operating system is not started.

14. A control method of controlling an apparatus having an external storage device having a normal partition which can be referred to by a user and a hidden partition hidden from the user, said method comprising the steps of:

- 5 previously storing an executable program for an operating system;
 reading the executable program for the operating system from the hidden partition to a main storage unit in response to a direction for reading the program from the user; and
 executing the operating system read into the main storage unit.

15. A product comprising:

- 10 a storage medium having a program stored therein which is readable by a computer having an external storage device which has a normal partition which can be referred to by a user and a hidden partition storing an executable program for an operating system and hidden from the user, said program causing the computer to function as:

- 15 a reader which reads the executable program for the operating system from the hidden partition to a main storage unit in response to a direction for reading the program from the user; and
 an execution unit which executes the operating system read into the main storage unit.

16. A computer readable recording medium having recorded thereon a program for causing a computer to operate as an apparatus, the computer having an external storage device having a normal partition which can be referred to by a user and a hidden partition storing an executable program for an operating system and hidden from the user, the program causing the computer to function as:

a reader which reads the executable program for the operating system from the hidden partition to a main storage unit in response to a direction for reading the program from the user; and

an execution unit which executes the operating system read into the main storage unit.